NETSCOUT TAP Family

Flexible TAPs Enable Seamless Access to Network Links

HIGHLIGHTS

- Full and Transparent Access to Network Traffic
- Conserves Switch/Router Ports
- Deployment Versatility with Multiple Densities
- 10/100/1000 Copper Support
- 1, 10, 25, 40, and 100 Gbps Fiber Support
- Supports Service Delivery Management, Performance Management, Security, and Forensics Deployments
- Copper TAP Redundant Power Supplies

Product Overview

The NETSCOUT® TAP family provides network monitoring devices with full and reliable access to network traffic. With the versatility of offering multiple options for link types and speeds, NETSCOUT TAPs can be placed on any strategic network link for comprehensive, always-on monitoring of the IT infrastructure.

A NETSCOUT TAP provides transparent access to network traffic. The TAP is invisible to devices on both ends of the link causing no disruption to data flows or protocol transactions – down to the lowest link-level control protocols.

NETSCOUT TAPs provide monitoring devices with an exact view of all packets on the monitored link, thereby enabling accurate packet analysis and capture. Compared to the use of a network device's traffic mirroring capabilities, a NETSCOUT TAP avoids any potential limitations in the device's architecture that might cause packet header loss/alteration or packet loss under heavy load.

Finally, NETSCOUT TAPs provide the most accurate view of application transaction times since there is minimal latency or latency variation added that might be introduced by a network device's mirroring process. This improves the accuracy of performance evaluation and modeling.

Conserves Switch and Router Ports

NETSCOUT TAPs allow the systems architect to devote network device ports to actual service usage, thereby extending the longevity of network devices at a given location and simplifying capacity planning for future growth.

Copper TAPs	|	1-Link, 10/100/1000 Ethernet, 8-link, 10/100/1000 Ethernet
Fiber Optic Multimode TAPs	|	HD, 1-Link, 1 Gbps, 1/10/25/40/100 Gbps LC, 40/100 Gbps MPO
Fiber Optic Singlemode TAPs	|	HD, 1-Link, 1/10/25/40/100 Gbps
Fiber Optic BiDi TAP	|	HD, 1-Link, 40/100 Gbps BiDi

Deployment Flexibility

NETSCOUT TAPs offer multiple form factors, monitored link densities, and media support for optimal versatility. The 1-link copper TAPs can be deployed in densities from 1 TAP up to 3 TAPs in a single rack unit (RU) – using the rackmount adapter kit. The 8-link copper TAP supports tapping of 8 full-duplex copper links in a single RU without the need for a rackmount kit.

The HD Fiber TAP chassis supports all HD fiber TAP module options in a single chassis. With up to 24 TAPs in a single rack unit, datacenter configuration can mix and match variable TAP modules at high densities. This flexibility supports evolving optical network conditions, from collections of homogenous links to those with various speeds and feeds. As networks upgrade, TAP modules can be easily added or swapped out.

Resilience to Power Failure

NETSCOUT fiber optic TAPs require no power; they are unaffected by power outages. NETSCOUT copper TAPs utilize redundant power supplies with non-disruptive, automatic failover in case of power loss or power supply failure. In case of total power loss, the copper TAPs feature rapid failover to passive, pass-through mode in order to minimize disruption to the monitored link. For maximizing availability, system architects can also utilize copper TAPs with built-in battery backup, which maintain active operation and avoids disruptions to the monitored link until TAP power is restored.

Sample Deployment Scenarios

Inside the data center, the HD (high density) Fiber TAPs can be ideally utilized for providing access to network flows traversing the high-density 40 Gbps and 100 Gbps backbones and 10 Gbps uplinks from the edge to the aggregation layers, while also providing access to legacy 1 Gbps uplinks, all in one chassis. The capability to dynamically add monitored links, with up to 24 links per rack unit, allows for scaling the packet-flow access solution while conserving rack space – a vital resource in data center environments. For high-speed connectivity of aggregation-to-core or core-to-core devices, the 40 Gbps and 100 Gbps HD Fiber TAPS can be utilized with densities matching the target deployment. Furthermore, at the border of the data center where link density is low, 1-link HD Fiber TAPs can be used.

In enterprise networks where there is a prevalence of 10/100/1000 Ethernet copper links, NETSCOUT copper TAPs may be deployed in a variety of locations to complement the HD Fiber TAPs. For instance, at the enterprise border where Internet/WAN connectivity speeds and link densities are lower than those in the aggregation/core, the 1-/8-link 10/100/1000 Ethernet copper TAP can be used. With densities up to 3 or 8 links per rack unit, the NETSCOUT copper TAPs are an ideal fit for monitoring flows crossing the enterprise border.

Enhancing Monitoring with Intelligent Packet Flow Switching

NETSCOUT TAPs associate monitored links to monitoring devices in a one-to-one mapping, thereby supporting basic load distribution. For advanced monitoring scenarios, a NETSCOUT TAP can be used in conjunction with the nGenius® Packet Flow Switch which provides intelligent flow filtering, aggregation, and distribution to multiple service delivery management devices, like the InfiniStream® appliances, as well as to other monitoring devices like intrusion detection/prevention systems (IDS/IPS), malware protection systems (MPS), and forensic devices.

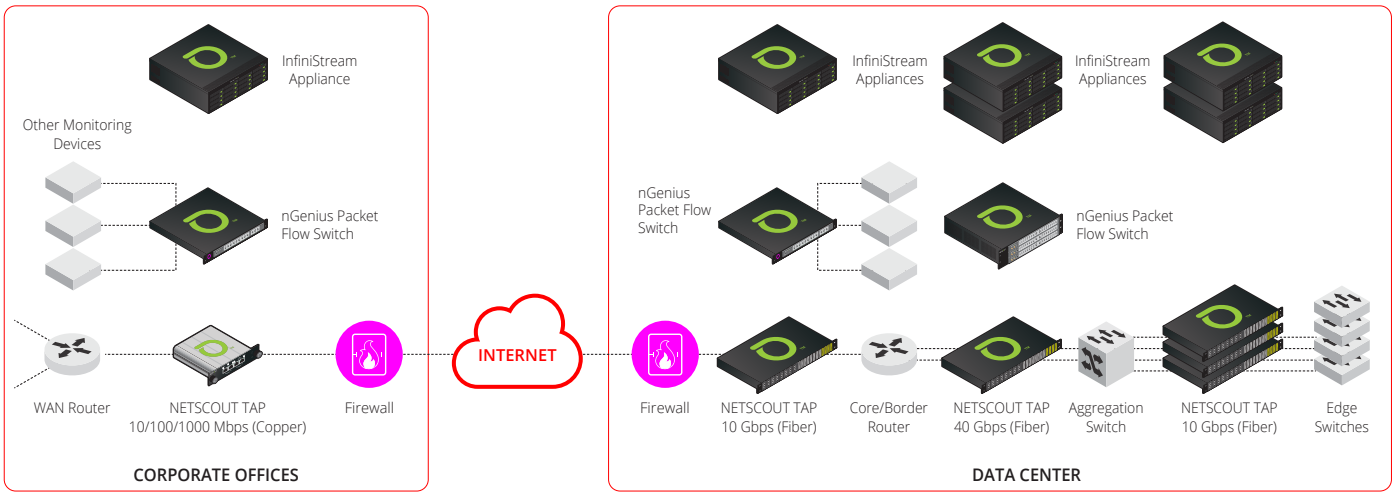

Figure 1: Sample NETSCOUT TAP deployment scenarios in enterprise campus and data center.

SPECIFICATIONS: FIBER TAPs

1/10/25/40/100G MM LC and 1/10/25/40/100G SM LC HD Fiber TAPs

	HD Fiber TAP		
TAP Technology	Passive Optical Splitter (MM 50 µm uses Thin Film technology)		
Split Ratio[1]	50/50	60/40	70/30
Connector Type	LC		
Fiber Support	Multimode: 50 µm[2], 62.5 µm; Singlemode: 9 µm		
MM Maximum Insertion Loss[3] (dB)	3.95/3.95	3.0/4.9	2.05/6.05
SM Maximum Insertion Loss[3] (dB)	3.6/3.6	2.7/4.8	1.9/6.0
Density (Monitored Links per RU)	24		
Rackmount	Requires Rackmount Kit, Up To 24 TAPs per Kit		
Dimensions	0.71 W x 1.61 H x 10.03 D (in) 1.80 W x 4.09 H x 25.48 D (cm)		
Weight	0.18lbs (0.08kg)		
Operating Temperature	32°F - 122°F (0°C - 50°C)		
Non-operating Temperature	14°F - 176°F (-10°C - 80°C)		
Operating Relative Humidity	10% - 90%, non-condensing		
Non-operating Relative Humidity	10% - 90%, non-condensing		
Maximum Power Consumption (W)	N/A		

40/100G MM MPO (SR4) and 40/100G SM MPO HD Fiber TAPs

	HD Fiber TAP		
TAP Technology	Passive Optical Splitter (MM uses Thin Film technology)		
Split Ratio[1]	50/50	60/40	70/30
Connector Type	MPO		
Fiber Support	Multimode: 50 µm2, Singlemode: 9 µm		
MM Maximum Insertion Loss[3] (dB)	3.95/3.95	3.0/4.9	2.05/6.05
SM Maximum Insertion Loss[3] (dB)	3.6/3.6	2.7/4.8	1.9/6.0
Density (Monitored Links per RU)	16		
Rackmount	Requires Rackmount Kit, Up To 16 TAPs per Kit		
Dimensions	1.06 W x 1.61 H x 10.03 D (in) 2.69 W x 4.09 H x 25.48 D (cm)		
Weight	0.26lbs (0.12kg)		
Operating Temperature	32°F - 122°F (0°C - 50°C)		
Non-operating Temperature	14°F - 176°F (-10°C - 80°C)		
Operating Relative Humidity	10% - 90%, non-condensing		
Non-operating Relative Humidity	10% - 90%, non-condensing		
Maximum Power Consumption (W)	N/A		

40/100G BiDi MM LC HD Fiber TAP

	HD Fiber TAP
TAP Technology	Passive Optical Splitter (Thin Film technology)
TAP Type	40/100 Gbps BiDi
Split Ratio[1]	50/50
Connector Type	Quad LC
Fiber Support	Multimode: 50 µm[2]
Maximum Insertion Loss[3] (dB)	3.95/3.95
Density (Monitored Links per RU)	16
Rackmount	Requires Rackmount Kit, Up To 16 TAPs per Kit
Dimensions	1.06 W x 1.61 H x 10.03 D (in) 2.69 W x 4.09 H x 25.48 D (cm)
Weight	0.26lbs (0.12kg)
Operating Temperature	32°F - 122°F (0°C - 50°C)
Non-operating Temperature	14°F - 176°F (-10°C - 80°C)
Operating Relative Humidity	10% - 90%, non-condensing
Non-operating Relative Humidity	10% - 90%, non-condensing
Maximum Power Consumption (W)	N/A

[1] Split Ratio – Ratio of percentage of monitored link optical power passed through versus the percentage redirected passively to the monitoring port.

[2] 50µm optical splitters utilize newer Thin Film technology.

[3] Max. Insertion Loss – The figures express the worst case power loss, in dB, due to optical power splitting. The figure for the monitored link is quoted first followed by that for optical power redirected to the monitoring port.

Copper TAPs

	1-Link TAP	8-Link TAP
TAP Technology	Active circuitry	
Connector Type	RJ-45	
Link Speed	10/100/1000 Ethernet	
Density (Monitored Links / RU)	3	8
Rackmount	Requires rackmount kit. Up to 3 TAPs per kit.	Ready
Dimensions	4.45 W x 1.18 H x 5.24 D (in) 11.30 W x 3.00 H x 13.31 D (cm)	17.32 W x 1.73 H x 9.84 D (in) 43.99 W x 4.39 H x 24.99 D (cm)
Weight	0.66lbs (0.30kg)	4.85lbs (2.20kg)
Operating Temperature	32°F - 122°F (0°C - 50°C)	
Storage Temperature	-7.6°F - 158°F (-22°C - 70°C)	14°F - 176°F (-10°C - 80°C)
Operating Relative Humidity	10% - 90%, non-condensing	
Storage Relative Humidity	10% - 90%, non-condensing	
Max. AC Power Consumption	@ 100-240 V, 50/60Hz, AC: 4 W AC w. battery backup: 13.7 W	@ 100-240 V, 50/60Hz: 39 W
Max. DC Power Consumption	@ -48 to -60 V: 5.9 W	-
Max. Thermal Output (Btu/h)	14	100
Power Supply Type	External	Internal
Power Redundancy	1 + 1 AC, 1+1 AC with battery backup 1 + 1 DC	1 + 1 AC

TAP Products

SKU	Description
321-2068	Rack Mount, HD Fiber TAPs, 16-24 slot, 1U
340-1092	HD Fiber TAP, 1G/10G/25G/40G/100G, SM, 60/40, LC
340-1080	HD Fiber TAP, 1G/10G/25G/40G/100G, SM, 50/50, LC
340-1081	HD Fiber TAP, 1G/10G/25G/40G/100G, SM, 70/30, LC
340-1106	HD Fiber TAP, 40G/100G, SM, 60/40, MPO
340-1105	HD Fiber TAP, 40G/100G, SM, 50/50, MPO
340-1107	HD Fiber TAP, 40G/100G, SM, 70/30, MPO
340-1094	HD Fiber TAP, 1G/10G/25G/40G/100G, 50um OM4, MM, 60/40, LC
340-1084	HD Fiber TAP, 1G/10G/25G/40G/100G, 50um OM4, MM, 50/50, LC
340-1085	HD Fiber TAP, 1G/10G/25G/40G/100G, 50um OM4, MM, 70/30, LC
340-1109	HD Fiber TAP, 40G/100G SR4, MM, 60/40, MPO
340-1086	HD Fiber TAP, 40G/100G SR4, MM, 50/50, MPO
340-1108	HD Fiber TAP, 40G/100G SR4, MM, 70/30, MPO
340-1088	HD Fiber TAP, 40G/100G BiDi, MM, 50/50, LC
340-1093	HD Fiber TAP, 62.5um OM1, MM, 60/40, LC
340-1082	HD Fiber TAP, 62.5um OM1, MM, 50/50, LC
340-1083	HD Fiber TAP, 62.5um OM1, MM, 70/30, LC
321-1519	Kit, TAP Panel, 3 - Slot, Rackmount Shelf, 1U
340-1039	Kit, TAP, 1 Line/Link Copper Ethernet 10/100/1000 Module, Redundant Power, 1U
340-1046	Kit, TAP, 8 Line/Link Copper Ethernet 10/100/1000 w/Redundant Power, 1U
340-1049	Kit, TAP, 1 Line/Link Copper Ethernet 10/100/1000 Module, -48VDC
340-1050	Kit, TAP, 1 Line/Link Copper Ethernet 10/100/1000 Module, w/Redundant AC Power & Battery Back-up
321-1594	Kit, FRU, Battery for 1 Line/Link Copper Ethernet 10/100/1000 TAP w/Battery Backup

HD Fiber TAP, 1G/10G/25G/40G/100G, SM, LC.

HD Fiber TAP, 40G/100G SM, MPO.

HD Fiber TAP, 1G/10G/25G/40G/100G, MM, LC.

HD Fiber TAP, 40G/100G SR4, MM, MPO.

HD Fiber TAP, 40G/100G BiDi, MM, LC.

NETSCOUT

Corporate Headquarters
NETSCOUT Systems, Inc.
Westford, MA 01886-4105
Phone: +1 978-614-4000
www.netscout.com

Sales Information
Toll Free US: 800-309-4804
(International numbers below)

Product Support
Toll Free US: 888-357-7667
(International numbers below)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: www.netscout.com/company/contact-us

PFSPDS_004_EN-2101 03/2021